

AN: PAT 2000-303885
 TI: Soldering semiconductor chip for e.g. RF-power transistor includes coating the chip with adhesion, solderable, anti oxidation and gold-tin solder layers, placing the chip on substrate, and soldering
 FN: WO200021346-A1
 PD: 13.04.2000
 AB: NOVELTY - A semiconductor chip is soldered to a substrate by coating the chip with an adhesion layer, a solderable layer, an anti oxidation layer and a gold-tin (Au-Sn) solder layer; placing the chip on the substrate; soldering; and solidifying the solder. DETAILED DESCRIPTION - A semiconductor chip is soldered to a substrate by coating the chip with an adhesion layer, a solderable layer, an anti oxidation layer and a gold-tin (Au-Sn) solder layer; placing the chip on the substrate; exposing the capsule and the chip to an inert environment to which a reducing gas is delivered and subjecting the capsule and chip to a vacuum pressure while heating the solder; increasing the gas pressure as the solder is molten; and solidifying the solder. AN INDEPENDENT CLAIM is also included for a radio frequency (RF)-power transistor having semiconductor chip(s) and capsule.; USE - For soldering a semiconductor chip to a substrate, e.g. a capsule in an RF-power transistor. ADVANTAGE - The method provides a pore-free solder joint at low solder solidification temperature, allows the use of aluminum nitride as a ceramic insulator instead of highly toxic beryllium oxide, is feasible to batch and automated operation, allows an accurate determination of the solder joint thickness, affords a solder joint having a conductivity twice that of the solder joints using conventional gold-silicon alloy and allows low soldering temperature.

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 IN: OLOFSSON L;
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 SE9803350-A 03.04.2000; SE9812906-C2 05.06.2000;
 AU200011932-A 26.04.2000; TW410537-A 01.11.2000;
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